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THE COINS OF THE JEWS

The International Numismata Orientalia. Vol. ii. *Coins of the Jews.* By Frederic W. Madden, M.R.A.S. (London: Trübner and Co., 1881.)

THIS goodly quarto of nearly 350 pages, illustrated by 279 woodcuts, forms the second volume of the *International Numismata Orientalia*, which has been for some time in course of publication under, we believe, the chief editorship of Mr. Edward Thomas. The work now before us may be regarded as being virtually a second edition of Mr. Madden's "History of Jewish Coinage and of Money in the Old and New Testaments," which was published in 1864; but in many respects the book has been so much enlarged, and we venture to think improved, that it may almost take rank as a new work. Any summary of the strictly numismatic details of such a publication would be out of place in the pages of *NATURE*, but the public interest in all modern researches in the Holy Land, such as those carried on under the Palestine Exploration Fund, and the success that has attended the foundation of the Society of Biblical Archaeology, prove the strong hold which, in this, and indeed in all Christian countries, the cradle of our religion retains.

Of contemporary witnesses of history, coins are among the best, but since the days of Bayer, the Archdeacon of Valentia, who wrote "*De Nummis Hebræo-Samaritanis*" just a century ago, there was a lull in the study of this branch of numismatics until within the last thirty years, when the labours of De Sauloy, Cavedoni, Levy, Von Werlhof, Reichardt, Madden, Garrucci, Merzbacher, and others began. The results of these labours, incorporated in Mr. Madden's present work, contrast strangely with Pinkerton's estimation of the Jewish coinage, as expressed in his *Essay on Medals*, which for many years was almost the only work of the kind accessible in English. The first edition appeared in 1784, but even in the third edition of 1808 we read:—

"The Hebrew shekels—which are of silver—and brass coins with Samaritan characters would have been put before, were not, most of them, later than the Christian æra, and generally the fabrication of modern Jews. At any rate the same impression of a sprig on one side and a vase on the other runs through all the coins of that barbarous nation; and the admission of but one of them is rightly esteemed to be almost a disgrace to a cabinet."

Certainly so far as art is concerned, the best and earliest of the Jewish coins compare unfavourably with those of the contemporary Seleucid rulers in Syria. For it must not be imagined that the Jewish shekel, notwithstanding its frequent mention in Scripture, was at any time an actual piece of coined money before the days of the Macabees—or at the earliest, the time of Alexander the Great and the high priest Jaddua. If we accept the views of Dr. Merzbacher, who is probably the most competent judge in this matter, the earliest of the Jewish shekels were not struck until B.C. 141-140, when those dated **נ.ש.**, the year one, were coined. These pieces are of silver, about the size of our shillings, and fully twice as thick, and range in date from the year 1 to 5. Half shekels are known up to the year 4. The devices on the

shekels are, on the one side, a cup or chalice, with the legend **שֶׁקֶל יִשְׂרָאֵל**, *Shekel Israel*; and on the other, what has been termed Aaron's rod, but what more resembles three lilies on one stem, and the legend *Jerusalem the Holy*. It is a curious circumstance, that on the coins of the first year, Jerusalem is spelt without a *yod*, and Holy is without the article and without the *vav*, **יְרוּשָׁלַם קְדוּשָׁה**, *Jerushalem kedoshah*; while on the later coins the legend is always **יְרוּשָׁלַם הַקְדוּשָׁה**, *Jerushalaim ha-kedoshah*.

Besides the silver coins, there is a copper coinage inscribed with "the year four," but it seems somewhat doubtful whether it belongs to the same period as the shekels bearing the same date. Possibly future finds of coins with the shekels and other pieces either Jewish or foreign intermixed may settle the question not only of contemporaneity, but of actual date. The fact of the coins of the fourth year bearing upon them the legend, "The redemption of Zion," as well as the shape of some of the letters, points to these coins belonging to a later date than the shekels. At the same time the fabric looks as if they were of earlier date than the coins of the revolts, shortly to be mentioned.

Of John Hyrcanus, Judas Aristobulus, and Alexander Jannæus there are numerous copper coins of undoubted attribution. The Herods and Agrippas are also well represented; but among the most interesting, and at the same time perplexing coins of the series are those which were struck under the revolts against the Roman power, from A.D. 66 to 70, under Vespasian, and again under Hadrian, from A.D. 132 to 135. Without entering into any details with regard to these coins, it may be worth while to mention some of the devices upon them and to add a few words as to their palæographical bearing. Although portraits occur on coins of some of the Idumæan princes, the representation of any living creature is carefully avoided on all the more purely Jewish pieces. A favourite device is the palm tree, like which "the righteous shall flourish"; though this was also a common device on coins of Carthage. The *lulab*, or bunch of "branches of goodly trees," and the *ethrog*, or citron, such as were carried at the Feast of Tabernacles, also make their appearance on the coins. The vine leaf and the bunch of grapes, probably typical of "the vineyard of the Lord of hosts, being the house of Israel, and the men of Judah his pleasant plant," are often represented. The flagons and cups, and the lyres or "stringed instruments" and trumpets, are probably symbolical of the Temple worship; and on some of the shekels of the revolts we find a gateway which not improbably represents the Beautiful Gate of the Temple.

From a palæographical point of view the Jewish coinage is of great value as definitely fixing the ordinary forms of certain letters at given dates. This part of the subject is well illustrated by a folding plate comprising some thirty alphabets, from the ninth century B.C. to the tenth century after the Christian era. To these is prefixed an alphabet selected from Egyptian hieratic characters, from which M. François Lenormant and others have maintained that the early Phœnician alphabet was derived. Such a derivation appears to us at the best problematical; but it would be too much of a digression here to enter into the question. It is more to the purpose to note that while there is in the main a close correspondence between the

letters on the early shekels and those on the Moabite stone, and on the inscription of Esmunazar, there is in the case of some letters on the copper coins of the Asmonæan family, which are regarded as being but a few years later in date, a marked divergence. This is notably the case with the letters η , γ , and ψ ; and singularly enough these three letters revert to the forms employed on the silver shekels on some of the coins struck during the revolts, though the position of the letters is in some cases changed. Possibly the modification in the characters is due to their being so much smaller on the copper coins than on the silver. The persistence of the Phœnician or, as it may here be called, the Jewish or Samaritan character, is well exemplified by the legend on the shekel. It is of course retrograde, or to be read from right to left. The legend stands L F Q W W L P W , but when reversed, and the position of some of the characters slightly altered, it comes out as S P L I S R A L , in which S P L I S R A L can at once be seen, especially by eyes to which the Greek Σ and P are familiar.

Any notice of Mr. Madden's book would be incomplete without some reference to the Roman coins struck in commemoration of the Conquest of Judæa, of which excellent woodcuts are given. "Beneath her palm here sad Judæa weeps," while the captive warrior with his hands bound behind him, and his armour strewn upon the ground admirably typifies "How are the mighty fallen, and the weapons of war perished!" The sections devoted to money in the New Testament and to counterfeit Jewish coins will be read by many with interest, while the opening chapters on the early use of silver and gold, and on the invention of coined money, contain an excellent summary of our present knowledge. To the numismatist a work like the present is of special value, but we think that the ordinary student who neither knows nor cares in the smallest degree for coins as tangible objects for study or collection, will find much to reward him for a perusal of the non-numismatic parts of the volume, while to the theologian, and especially to the student of Jewish history, much of the information here contained is almost indispensable.

JOHN EVANS

THOMPSON'S LESSONS IN ELECTRICITY

Elementary Lessons in Electricity and Magnetism. By Silvanus P. Thompson, B.A., D.Sc., F.R.A.S., Professor of Experimental Physics in University College, Bristol. (London: Macmillan and Co., 1881.)

WE are glad to welcome a really admirable attempt to place before students the modern doctrines concerning electricity and magnetism in a popular but reasonably accurate form. The book begins with a rapid historical sketch of the long known facts on which it is the custom to dilate in every elementary text-book on electricity; but the historical statements indicate by little additional details that they have not been simply copied from the joint-stock property of text-book writers, but that some original authorities have been referred to. This portion of the book occupies the first 190 pages, and it does not call for special remark; the illustrations are, as a rule, familiar ones, but there is a very convenient magnetic map of England for 1888 as a frontispiece; and everything relating to the use of iron filings is well and

clearly put, as would naturally be expected. The author's statements of the well-worn facts are moreover interspersed with notes and characteristic touches which redeem them from dulness.

The second half of the book commences in Chap. IV. with the principle of electrostatic measurement and the definition of potential, which the author proceeds to apply to various cases; and he succeeds in giving the theory of attracted disk electrometers and of the capacity of condensers in a way which it is very satisfactory to find in so small a book. It is in the possession of this more strictly scientific information that the book differs from its predecessors in the same line, and we think the author has shown much ingenuity in contriving to pack into so small a compass not only all the ordinary popularly known facts, but also a considerable amount of more advanced science, which will be most acceptable to teachers and to students, who have long been accustomed to a great gap between mere experimental treatises on the one hand, and advanced mathematics on the other.

After the chapter on Electrostatics comes one on Electrodynamics and Magnetic Measurements, which is very well done, though necessarily too concise to be in all parts readily intelligible to a beginner. It contains a reference to Rowland's convection experiment and to Hall's effect. The chapter which follows, on Ohm's law, is perhaps the least satisfactory in the book. We are not satisfied with the statement of Ohm's law, nor with what is said concerning the meaning and measurement of resistance. Towards the end of the book comes a brief account of the Siemens' and Gramme machines, of Planté cells, of telegraphs, telephones, and the electric light. There is also a chapter on "Electro-Optics," which refers to Dr. Kerr's discoveries and to Maxwell's theory of light.

If it is necessary to say anything by way of general criticism, it is that the author sometimes shows a disposition to theorise a little too baldly, and to state without qualification, and with an air of certainty and completeness, views concerning the nature of electricity, which, though undoubtedly they have some truth in them, *i.e.* which certainly are steps towards the truth, yet have no finality about them, and which require to be cautiously worded and expressed lest they should mislead. For instance, his statements in the preface that "electricity is not *two* but *one*"; that, "whatever it is, it is not *matter* and not *energy*"; that "it may be heaped up in some places and will do work in returning to its former level distribution," are all, considered strictly, unjustifiable dogmas of the kind we have mentioned. A student ought to be puzzled by the unqualified statement "that more electricity can be made to appear at one place and less at another" when he has learnt from Maxwell that it always behaves exactly like an incompressible fluid of which all space is completely full. Neither are we altogether disposed to approve of the phrase "Conservation of Electricity," by which the author seems to set much store.

However, all these doctrines are immense improvements on the old forms of the fluid theory, and, being steps towards truth, will probably do far more good than harm. We are fully impressed with the necessity in teaching of getting *some* ideas into the heads of the students to begin with, and of polishing them up as much as possible afterwards.